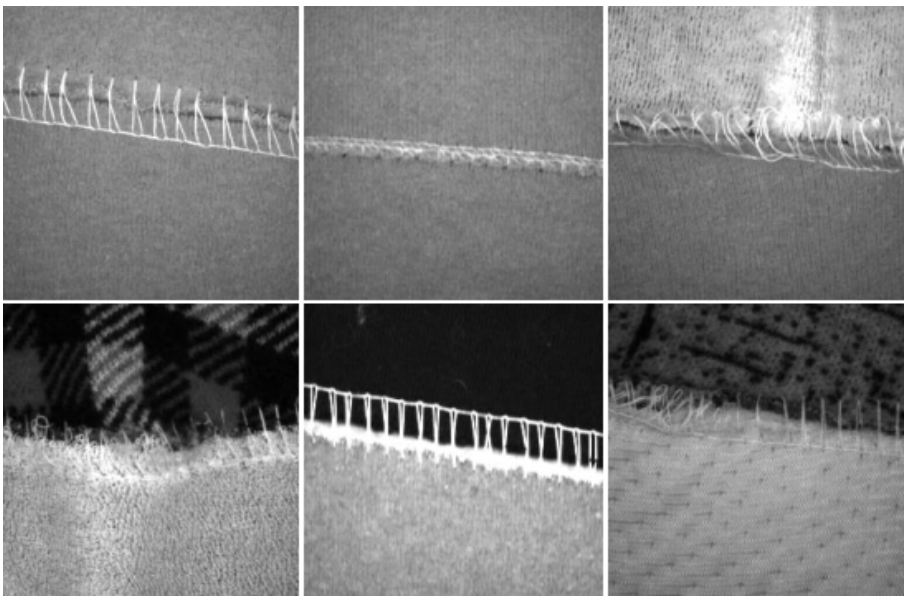
Seam sensor ELSEAMTEX SI 1001

- Unique seam sensor that detects optically and therefore without contact any type of seam on printed or single-color fabrics
- New algorithmic approaches as well as the usage of the latest technology make it possible for the first time to acquire cross-seams at the level of human perception.
- WLAN card for reliable communication with mobile terminal devices such as smartphones or tablets
- E+L app for Android and iOS
- Remote access using Teamviewer via RJ45 Ethernet interface and external computer (only for technical service)
- HDMI and USB connection for monitor and mouse (only for technical service)

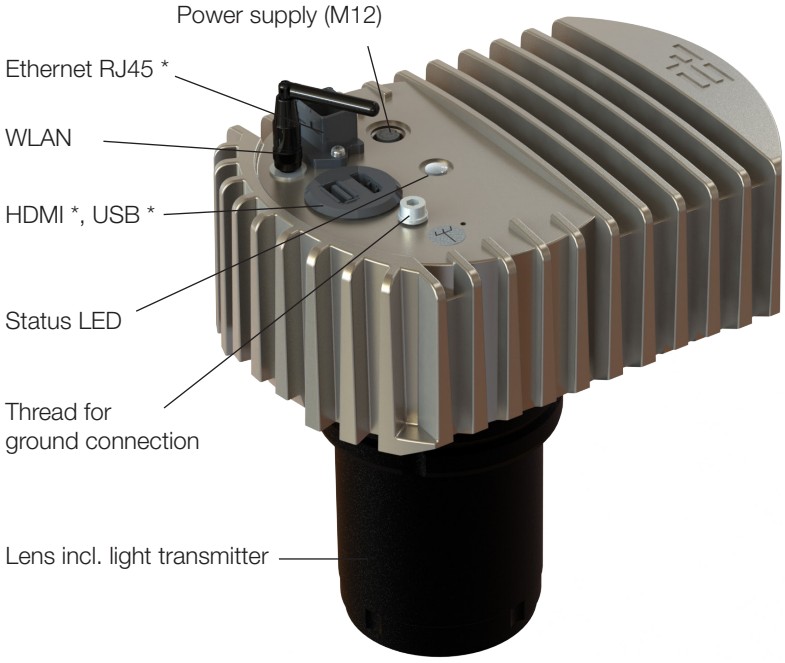
Function
The SI 1001 operates with incident light and includes a ring-shaped light transmitter, a matrix camera with lens, a WLAN card and an evaluation unit. If a cross seam is detected, a digital output on the sensor is switched.

Application
Machines such as a calender, a shearing machine or a digital printing press, etc. require a signal as a seam enters, for example, to open the calender rollers, to raise the shearing blade briefly or to leave the seam to run through the digital printing press without printing.
The seam sensor can also be used to calculate the running meters per batch in a PLC.



Different seams

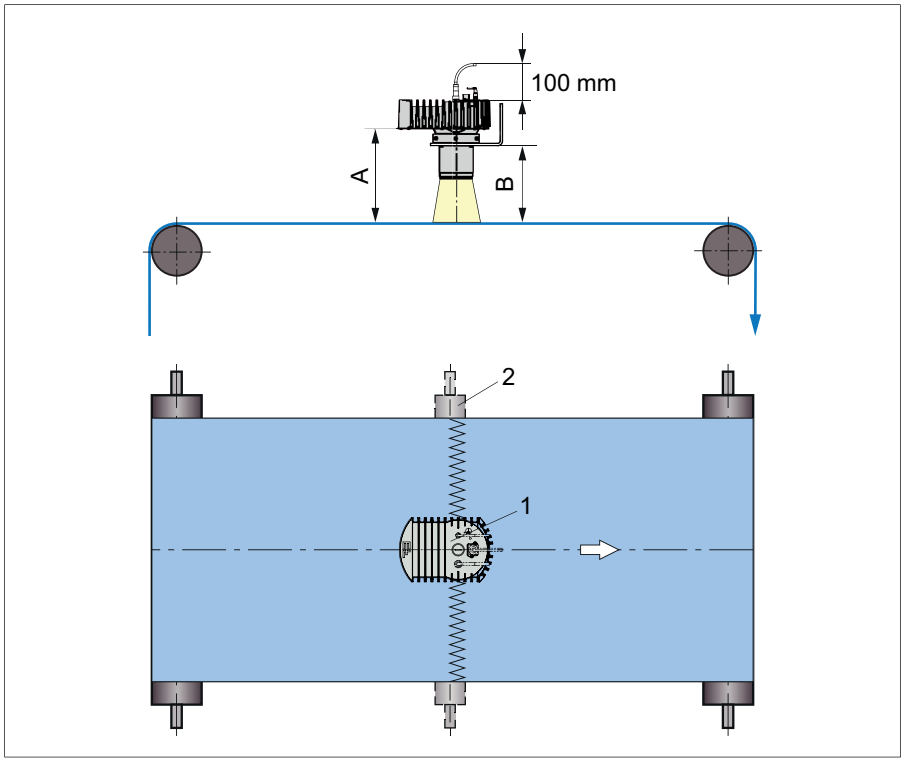
Layout / connections



* only for technical service

Colors of the status LED

Green	Sensor ready for operation
Blue	Seam detected
White	Warning “possible seam detected“
Orange	Sensor is being switched on/ off
Red	Error



Legend
A Distance between sensor housing and web
B Distance between sensor holder and web
1 Seam sensor
2 Guide roller (only required in case of height fluctuations of the web)

Technical data

Measuring range	100 x 100 mm
Distance A	240 +/- 10 mm
Distance B	204 +/- 10 mm
Resolution	0.4 mm / pixel
Frame rate	100 fps
Web speed	Max. 120 m/min
Operating voltage Nominal value Nominal range	 24 V DC 20 to 30 V DC
Current consumption	2 A
Digital outputs	24 V DC electrically isolated - "Seam detected" - Warning “possible seam detected“
Current (digital outputs)	Max. 200 mA
Fieldbus connection (for service)	RJ 45
Other connections	HDMI (only for technical service) USB (only for technical service) WLAN 2.4 GHz, 802.11ac
Installation altitude	Max. 2000 m above sea level
Ambient temperature	0 °C to +55 °C
Storage temperature	-25 °C to +80 °C
Air humidity	15 to 95 % (without condensation)
Protection class	IP 54
Weight	1.90 kg
Dimensions (L x W x H)	198 x 135 x 171 mm

Subject to technical change without notice

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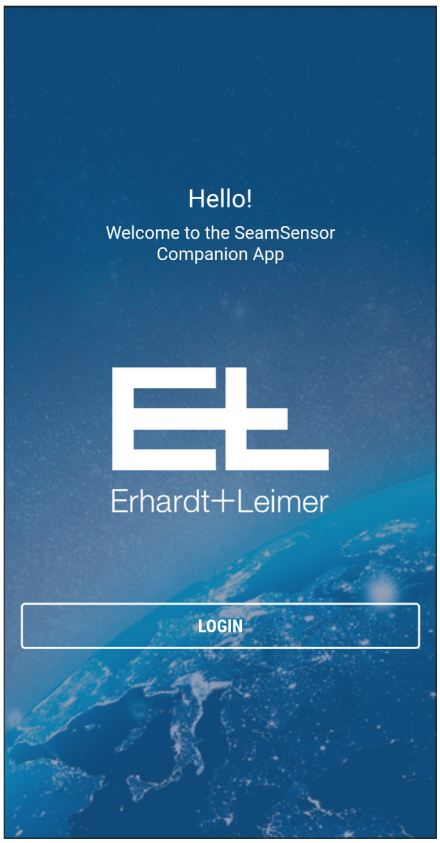


Start screen

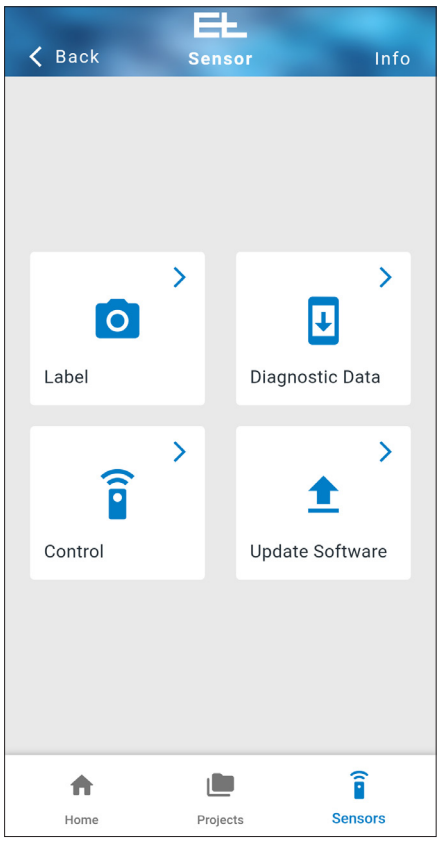
E+L AI Manager app for Android and iOS

Functions

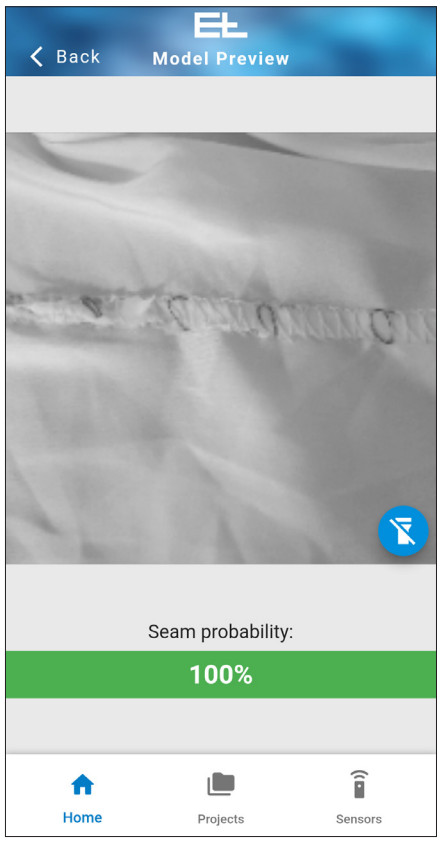
- Authenticated login for a secure connection
- Automatic notification and download option for software updates
- Installation of new software on the sensor via WLAN
- Live test of the new software via the integrated seam scanner (comparable with a QR code scanner)
- Access to log files
- Control of the sensors
- Transfer of log and image files from the sensor to mobile device and, if necessary, to the E+L server for the improvement of the detection rate

Android

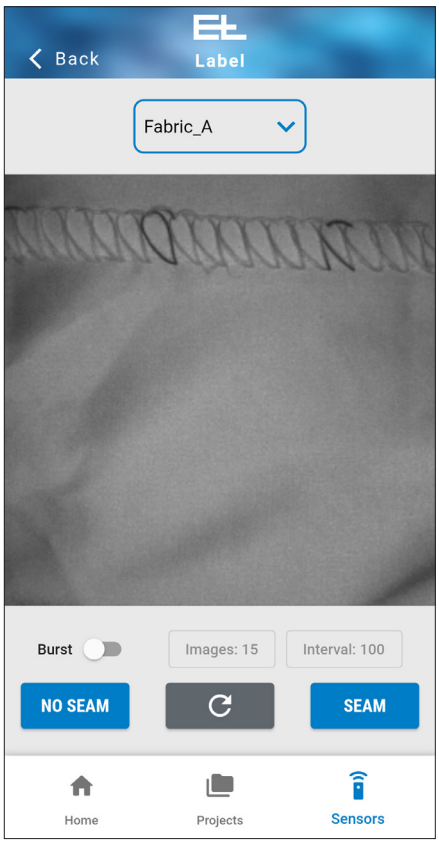
iOS



Sensor overview



Seam test with smartphone or tablet



Seam definition